APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,322	10/12/2001	Duc Pham	AESN3000	9241

23488 7590 03/14/2006	EXAMINER	
GERALD B ROSENBERG	ENGLAND, DAVID E	
NEW TECH LAW		
285 HAMILTON AVE	ART UNIT	PAPER NUMBER
SUITE 520	2143	
PALO ALTO, CA 94301		

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		09/976,322	PHAM ET AL.
		Examiner	Art Unit
		David E. England	2143

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 December 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-27</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/03/2005</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 20060306

DETAILED ACTION

1.   Claims 1 – 27 are presented for examination.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 8 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4.   Claim 8 recites the limitation "the aggregate performance". There is insufficient antecedent basis for this limitation in the claim.

5.   Claims 9 – 15 are rejected for their dependency on claim 8.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 – 6, 8, 10 – 13, 16 – 18 and 21 – 24 are rejected under 35 U.S.C. 102(e) as

being anticipated by Almulhem et al. U.S. Patent No. 6587431 (hereinafter Almulhem).

8. Referencing claim 1, as closely interpreted by the Examiner, Almulhem teaches a

network data processor system comprising a plurality of data packet processors coupled through

a data switch fabric between network connection processors, wherein said data packet processors

perform a data processing function over data contained within predetermined data packets,

wherein said network connection processors include network interfaces coupleable to external

data transmission networks and wherein said network connection processors provide for the

selective routing of said predetermined data packets through said data switch fabric to load

balance the processing of said predetermined data packets by said plurality of data packet

processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

9. Referencing claim 2, as closely interpreted by the Examiner, Almulhem teaches a

network data packet processor system providing for the transfer of packets between first and

second networks, said network data packet processor system comprising:

10. a) a data packet switch including pluralities of first and second data ports coupled

together to provide for the transfer of network data packets between respective first and second

data ports, (e.g., col. 7, lines 10 – 44);

11.   b) a plurality of data protocol processors coupled to a like plurality of said first data ports

of said data packet switch, each data protocol processor being coupled to a respective first data

port through a bidirectional packet transfer interface and including a protocol processing engine

providing for the selective conversion of data contained within a predetermined network data

packet, (e.g., col. 7, lines 10 – 44); and

12.   b) input and output data transfer processors coupled to respective second data ports of

said data packet switch, wherein said input data transfer processor selectively routes network

data packets from said first network to said plurality of data protocol processors and said output

data transfer processor routes network data packets from said plurality of protocol processors to

said second network, and wherein said input data transfer processor balances the load of

individual network data packets routed to said plurality of data protocol processors, (e.g., col. 7,

lines 10 – 44 & col. 8, lines 30 – 39).

13.   Referencing claim 3, as closely interpreted by the Examiner, Almulhem teaches a

network gateway processor comprising:

14.   a) a switch providing data routing between input, output, and processing ports, (e.g. col.

8, lines 40 – 44, *"rotator space switch"*);

15.   b) an array of protocol processors coupled to respective processing ports, each said

protocol processor providing for the conversion of network data packets from a first form to a

second form, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39);

16.   c) an input processor coupled between a first network and said input port, said input

processor providing for the load balanced allocation of network data packets received from said

first network to said array of protocol processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 –

39); and

17.   d) an output processor coupled between a second network and said output port, wherein

said array of protocol processors provide network data packets of said second form to said output

processor for transfer to said second network, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

18.   Referencing claim 4, as closely interpreted by the Examiner, Almulhem teaches said

input processor selectively associates conversion control data with network data packets

provided to said array of protocol processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

19.   Referencing claim 5, as closely interpreted by the Examiner, Almulhem teaches said

conversion control data is provided with each network data packet provided to said array of

protocol processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

20.   Referencing claim 6, as closely interpreted by the Examiner, Almulhem teaches each said

protocol processor includes a data form conversion engine and wherein operation of said data

form conversion engine is defined by predetermined parameters identified by said conversion

control data and wherein said predetermined parameters are applied to said data form conversion

engine with respect to a corresponding network data packet, (e.g., col. 7, lines 10 – 44 & col. 8,

lines 30 – 39).

21.   Referencing claim 8, as closely interpreted by the Examiner, Almulhem teaches a method

of operating a network gateway coupleable between first and second networks to implement a

compute intensive data processing function on network data packets transferred between said

first and second networks, said method comprising:

22.   a) receiving, by a first processor coupleable to said first network, network data packets,

(e.g., col. 7, lines 22 – 55);

23.   b) selecting, from said received network data packets, predetermined network packets for

routing through said network gateway, (e.g., col. 7, lines 22 – 55);

24.   c) selectively distributing said predetermined network data packets to a plurality of

second processors so as to enable utilization of the aggregate performance of said second

processors in performing said compute intensive data processing function, (e.g., col. 7, lines 22 –

55 & col. 8, lines 30 – 39);

25.   d) processing, asynchronously, said predetermined network data packets as distributed

by said plurality of second processors to convert each of said predetermined network data

packets in accordance with said compute intensive data processing function to provide converted

network data packets, (e.g., col. 8, lines 8 – 29);

26.   e) collecting, by a third processor coupleable to said second network, said converted

network data packets, (e.g., col. 7, lines 22 – 55 & col. 8, lines 30 – 39); and

27.   f) transferring said converted network data packets to said second network, (e.g., col. 8,

lines 45 – 59).

28.   Referencing claim 10, as closely interpreted by the Examiner, Almulhem teaches said

compute intensive data processing function is dependent on configuration parameters and

wherein said method further comprising the steps of;

29.   a) obtaining said configuration parameters, (e.g., col. 8, lines 8 – 30); and

30.   b) applying said configuration parameters, within said step of processing, to control the

conversion of each of said predetermined network data packets, (e.g., col. 8, lines 8 – 39,

"configured policy").

31.   Referencing claim 11, as closely interpreted by the Examiner, Almulhem teaches said

step of obtaining includes negotiating, by a fourth processor, a set of configuration parameters

for a predetermined logical connection established through said network gateway between said

first and second networks and wherein said step of applying includes selecting said set of

configuration parameters with respect to a predetermined network packet associated with said

predetermined logical connection, (e.g., col. 8, lines 8 – 39, *"configured policy"*).

32.   Referencing claim 12, as closely interpreted by the Examiner, Almulhem teaches

33.   a) distributing, by said fourth processor to said first processor, said set of configuration

parameters, (e.g., col. 8, lines 8 – 39, *"configured policy"*); and

34.   b) associating, by said first processor, said set of configuration parameters with said

predetermined network packet such that said set of configuration parameters is passed, in

combination with said predetermine network packet by said step of selectively distributing, to a

predetermined one of said plurality of second processors, (e.g., col. 8, lines 40 – 59).

35.   Referencing claim 13, as closely interpreted by the Examiner, Almulhem teaches

36.   a) distributing, by said fourth processor to said second processors, said set of

configuration parameters, (e.g., col. 8, lines 8 – 39, *"configured policy"*); and

37.   b) associating, by a predetermined one of said second processors, said set of

configuration parameters with said predetermined network packet as passed by said step of

selectively distributing, to said predetermined one of said plurality of second processors, (e.g.,

col. 7, lines 23 – 44 & col. 8, lines 40 – 59).

38.   Claims 16 – 18 and 21 – 24 are rejected for similar reasons as stated above.

Claim Rejections - 35 USC § 103

39.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

40.   Claims 7, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Almulhem as applied to claims 1 – 6, 8 and 10 – 12 above, and in view of Arrow et al. (6226751)

(hereinafter Arrow).

41.   As per claim 7, as closely interpreted by the Examiner, Almulhem does not specifically

teach said data form conversion engine includes an encryption engine. Arrow teaches said data

form conversion engine includes an encryption engine, (e.g., col. 10, lines 21 – 31). It would

have been obvious to one of ordinary skill in the art, at the time the invention was conceived,

combine Arrow with Almulhem because a strong encryption scheme can essentially guarantees

privacy.

42.   As per claim 9, as closely interpreted by the Examiner, Almulhem teaches said compute

intensive data processing function one or a combination of functions consisting of protocol

translation, (e.g., col. 7, lines 23 – 44). Almulhem does not specifically teach said compute

intensive data processing function one or a combination of functions selected from a group

consisting of data encryption, decryption, compression and decompression. Arrow teaches said

compute intensive data processing function one or a combination of functions selected from a

group consisting of data encryption, decryption, compression and decompression, (e.g., col. 10,

lines 21 – 31). It would have been obvious to one of ordinary skill in the art, at the time the

invention was conceived, to combine Arrow with Almulhem because of similar reasons stated

above, furthermore utilizing compression formats requires less space than sending data

uncompressed.

43.   Claim 14 is rejected for similar reasons as stated above.

44.   Claims 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almulhem and

Arrow as applied to claims 8, 10 – 12 and 14 above, and in view of Booth, III et al. (6668282)

(hereinafter Booth).

45.   As per claim 15, as closely interpreted by the Examiner, Almulhem and Arrow do not

specifically teach said compute intensive data processing function implements a conversion

between an IP protocol and an IPsec protocol. Booth teaches said compute intensive data

processing function implements a conversion between an IP protocol and an IPsec protocol,

(e.g., col. 2, lines 25 – 45). It would have been obvious to one of ordinary skill in the art, at the

time the invention was conceived, to combine Booth with the combine system of Almulhem and

Arrow because a big advantage of IPSec is that security arrangements could be handled without

requiring changes to individual user computers.

46.   Claims 19, 20 and 25 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Almulhem as applied to claims 16 – 18 and 21 above, and in view of Booth.

47.   As per claim 19, as closely interpreted by the Examiner, Almulhem does not specifically

teach said protocol transformation is an implementation of a secure IP protocol. Booth teaches

said protocol transformation is an implementation of a secure IP protocol, (e.g., col. 2, lines 25 –

45). It would have been obvious to one of ordinary skill in the art, at the time the invention was

conceived, to combine Booth with Almulhem because of similar reasons stated above.

48.   As per claim 20 as closely interpreted by the Examiner, Almulhem does not specifically

teach said logical connection is a virtual private network and wherein said protocol

transformation implements a conversion between an IP protocol and an IPsec protocol. Booth

teaches said logical connection is a virtual private network and wherein said protocol

transformation implements a conversion between an IP protocol and an IPsec protocol, (e.g., col.

2, lines 25 – 45). It would have been obvious to one of ordinary skill in the art, at the time the

invention was conceived, to combine Booth with Almulhem because of similar reasons stated

above.

49.   As per claim 26, as closely interpreted by the Examiner, Almulhem teaches said control

processor is coupled through said switch fabric to transfer said protocol processing parameters to

a data table stored by said ingress processor, wherein said ingress processor dynamically attaches

headers selectively containing said protocol processing parameters to data packets prior to

transfer to said parallel array of protocol processors, the selection of said protocol processing

parameters being dependent on information contained in respective data packets, (e.g., col. 9,

lines 22 – 58).

50.   Claims 25 and 27 are rejected for similar reasons as stated above.

Response to Arguments

51.   Applicant's arguments filed 12/02/2005 have been fully considered but they are not

persuasive.

52.   In the Remarks, Applicant argues in substance that Almulhem does not show any

additional "data packet processor that perform a data processing function over data contained

within predetermined data packets.

53.   As to part 1, the Applicant is asked to draw their attention to the prior art of record as

cited above. In which one can see that the prior art of Almulhem teaches the limitations of claims

1 – 6, 8, 10 – 13, 16 – 18 and 21 – 24. More specifically Almulhem teaches multiple processors

that process packets and the data within such as protocols, EPI, IFM, ECP. These processors

along with other processors mentioned above teach "data packet processing". Furthermore, the

claim language of "a plurality of data packets processors coupled through a data switch fabric

between network connection processors" can also be interpreted in the same light as discussed

above in regards to the multiple processors coupled together to perform data packet processing.

54.   In the Remarks, Applicant argues in substance that the references fail to provide any

motivation to even consider combination of Arrow and Almulhem.

55.   As to part 2, Applicant in many instances states that the motivations is simply a truism, in

response to applicant's argument that the examiner's conclusion of obviousness is based upon

improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a

sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into

account only knowledge which was within the level of ordinary skill at the time the claimed

invention was made, and does not include knowledge gleaned only from the applicant's

disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170

USPQ 209 (CCPA 1971).

57.   In the Remarks, Applicant argues in substance that Booth and Almulhem, together or in

further combination with Arrow, fail to teach or suggest using a plurality of dedicated data

packet processors or, further, any way of incorporating such a plurality through an internal

switch-fabric to perform compute intensive packet data stream processing with any expectation

of success.

58.   As to part 3, Applicant is again asked to look at the prior art of the Office Action stated

above. There are multiple processors that have been described that process packets that are

taught by Almulhem, Arrow and Booth alone or in combination.

59.   All other Remarks fall in similar response to what is state above.

Conclusion

60.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David E. England whose telephone number is 571-272-3912.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

DE *PL*

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100